

### AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph on page 15, lines 18-34 as follows:

As described above, an error between the calculated temperature  $T_{tp}$  and the calibrated temperature  $T_{tc}$  is correlated with the temperature  $T_{gd}$  of the paper guide 13. FIG. 8 shows a relationship between a ratio of the calculated temperature  $T_{tp}$  to the calibrated temperature  $T_{tc}$  ( $T_{tc}/T_{tp}$ , this ratio is referred to as a "correction coefficient") and the temperature  $T_{gd}$  of the paper guide 13. The figure shows that the more the ratio ( $T_{tc}/T_{tp}$ ) on a vertical axis deviates from a value of 1, the larger an error of the calculated temperature  $T_{tp}$  with respect to the calibrated temperature  $T_{tc}$ . In the figure, a curved line portion of a solid line is approximated by a parabolic curve expressed by an expression (2).

$$T_{tc}/T_{tp} = A1 \times T_{gd}^2 + B1 \times T_{gd} + C1 \quad \dots (2)$$

where

$$A1 = 1.56 \times 10^{-5}$$

$$B1 = -2.53 \times 10^{-3}$$

$$C1 = 1.1017$$

Please amend the paragraph on page 20, lines 3-25 as follows:

In this embodiment, in place of the expression (2) described with regard to Embodiment 1, the following expression (3) is used to correct a calculated temperature  $T_{tp}$  so as to obtain a determined temperature  $T_{fb}$ .

$$T_{fb} = T_{tp} \times (A2 \times T_{tm}^2 + B2 \times T_{tm} + C2) \quad \dots (3)$$

where

$$A2 = 1.57 \times 10^{-5}$$

$$B2 = -2.67 \times 10^{-3}$$

$$C2 = 1.1054$$

In this embodiment, using the temperature  $T_{tm}$  of the cold junction of the thermopile 30 for compensation, the temperature of the members opposed to the fixing belt 12 is assumed. The temperature of the members (for example, the paper guide 13) opposed to the fixing belt 12 is not necessarily equal to the temperature of the cold junction of the thermopile 30. However, the members and the cold junction are both heated by heat radiated from the fixing belt 12, and there is a correlation between a change in the temperature of the members and a change in the temperature of the cold junction. Therefore, using the temperature of the cold junction of the thermopile 30, the temperature of the members opposed to the fixing belt 12 can be assumed. Thus, using the temperature of members that are not opposed to the fixing belt 12, the intensity of infrared rays to be incident on the thermopile 30 can be corrected.